

Faunal List of Oribatid Mites (Acari: Oribarida) in Mt. Jumbong, Nature Reserve Area in Korea

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Abstract A total of 143 species belonging to 81 genera under 52 families of oribatid mites were collected at four sites in Mt. Jumbong which is a nature reserve area in Korea (102 spp., 48 gen., 33 fam. at the plantation of Korean pine in alt. 900m; 97 spp., 57 gen., 38 fam. at the mixed forest in alt. 1,100 m; 72 spp., 49 gen., 36 fam. at the north-facing slope site where lower vegetation was annual herbaceous; 102 spp., 63 gen., 44 fam. at the south-facing slope site where lower vegetation was perennial sasa in alt. 1,000 m; and these slopes were adjacent to each other and composed of deciduous trees).

Key words Oribatida, pine, mixed forest, deciduous, Mt. Jumbong

INTRODUCTION

The oribatid mites are a major group among soil arthropods in forest ecosystems and play important roles such as decomposition of organic materials, changing of physical and chemical soil textures, consumption and control of microorganisms etc. (Wallwork, 1983; Lussenhop, 1992). Of 9,200 species recorded from all over the world, 281 species belonging to 154 genera under 73 families were reported by Choi (1988) in Korea. Most studies on oribatids in Korea are mainly taxonomic (Choi, 1985, 1986a, 1986b, 1986c, 1986d, 1988, 1989, 1994) and a few ecological studies were conducted (Choi, 1984; Park, 1995; Jung 1996; Kang 1996). Mt. Jumbong is a typical Korean deciduous forest which was designated as a core area of 'man and biosphere' by UNESCO. The long-term ecological studies in Mt. Jumbong have been recognized as crucial in understanding natural ecosystems and implementing a nature conservation plan. No investigation on the oribatid mites fauna in Mt. Jumbong was made before our study. Here we introduced the oribatid mites fauna, which is a result of 2 year investigation from 1994 to 1995, in Mt. Jumbong for the first time.

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SYSTEMATICS

CLASS ACARI

SUPERORDER ACTINOTRICHIDA

ORDER ORIBATIDA

I. Oribatid mites at the plantation of Korean pine in Alt. 900m

Family Palaeacaridae Grandjean, 1932 옛응애과

Palaeacarus hystricinus (Tragardh, 1932)

Family Mesoplophoridae Ewing, 1917 어리조개응애과

Mesoplophora japonica (Aoki, 1966)

Family Brachychthoniidae Thor, 1934 마디응애과

Brachychthonius elsosneadensis (Hammer, 1958)

B. jugatus (Forsslund, 1942)

Liochthonius sellnicki (Thor, 1930)

L. sp.1.

L. sp.2.

L. sp.3.

L. sp.4.

Family Hypochthoniidae Berlese, 1910 띠응애과

Eohypochthonius magnus (Aoki, 1977)

E. parvus (Aoki, 1977)

Hypochthonius rufulus (Koch, 1836)

Family Eniochthoniidae Grandjean, 1947 두줄띠응애과

Hypochthoniella minutissima (Berlese, 1904)

Family Eulohmanniidae Grandjean, 1953 유령응애과

Eulohmannia ribagai (Berlese, 1910)

Family Perlohmanniidae Grandjean, 1953 장수응애과

Aplohmannia gigantea (Aoki, 1960)

Family Phthiracaridae Perty, 1841 조개응애과

Paraphthiracarus lanatus (Aoki, 1980)

Family Steganacaridae Niedbala, 1986 가시조개응애과
Atropacarus (Atropacarus) striculus (Koch, 1836)

Family Euphthiracaridae Jacot, 1930 배꼽조개응애과
Microtrititia minima (Berlese, 1904[1905])
Rhysotrititia ardua (Koch, 1841)

Family Camisiidae Oudemans, 1920 왕응애과
Camisia sp.1.
Platynothrus yamasakii (Aoki, 1958)
P. sp.1.

Family Malaconothridae Berlese, 1916 장님응애과
Malaconothrus japonicus (Aoki, 1966)
M. *pygmaeus* (Aoki, 1969)

Family Nothridae Berlese, 1896 그물왕응애과
Nothrus biciliatus (Koch, 1841)
N. *palustris* (Koch, 1844)
N. *silvestris* (Niolet, 1855)

Family Trhypochthoniidae Willmann, 1931 쌍무늬응애과
Trhypochthonius tectorum (Berlese, 1896)
T. *japonicus* (Aoki, 1970)

Family Nanhermanniidae Sellnick, 1928 해변응애과
Nanhermannia elegantula (Berlese, 1913)

Family Damaeidae Berlese, 1896 빨염주응애과
Damaeus armatus (Aoki, 1984)
Epidamaeus sp.1.
E. sp.2.

Family Damaeolidae Grandjean, 1965
Costeremaeus ornatus (Aoki, 1970)
Fosseremus quadripertitus (Grandjean, 1965)

Family Eremobelbidae Balogh, 1961 귀응애과
Eremobelba japonica (Aoki, 1959)

Family Ameridae Grandjean, 1965 민둥정응애과

Defectamerus soonkii (Choi et Aoki, 1985)

D. crassisetiger coreanus (Choi et Aoki, 1985)

D. sungohi (Choi et Aoki, 1985)

Family Eremaeidae Sellnick, 1928 다리차양응애과

Eremaeus tenuisetiger (Aoki, 1970)

Family Gustaviidae Oudemans, 1900 싹톱응애과

Gustavia microcephala (Nicolet, 1855)

Family Liacaridae Sellnick, 1928 달걀응애과

Liacarus orthogonius (Aoki, 1959)

Family Metriopodidae Balogh, 1943 뜯지게응애과

Ceratoppia bipillis (Hermann, 1804)

C. quadridentata (Haller, 1882)

Family Carabodidae Koch, 1842 왕응애과

Carabodes rimosus rimosus (Aoki, 1970)

Family Tectocephidae Grandjean, 1953 사각머리응애과

Tectocephus cuspidatus (Knülle, 1954)

T. velatus (Michael, 1880)

T. titanius (Okubo, 1982)

T. sp. 1.

Family Oppiidae Grandjean, 1951 좁쌀응애과

Brachioppiella ctenifera barbata (Choi, 1986)

Machuellia ventrisetosa (Hammer, 1961)

Multioppia gapsaensis (Choi, 1986)

M. pulchra (Littlewood et Wallaork, 1972)

Oppia sp. 1.

O. sp. 2.

O. sp. 3.

O. sp. 4.

Oppiella nova (Oudemans, 1902)

Quadroppia quadricarinata (Michael, 1885)

Family Suctobelbidae Grandjean, 1954 유리창응애과

Suctobelbella naginata (Aoki, 1961)

S. *longisensillata* (Fujita et Fujikawa, 1987)

S. *yezoensis* (Fujikawa et Fujita, 1987)

S. sp.1.

S. sp.2.

Family Parakalummidae Grandjean, 1963 주머니나비응애과

Neoribates roubali (Berlese, 1910)

Protokalumma parvisetigerum (Aoki, 1965)

Family Protoribatidae Balogh et Balogh, 1984 긴소매응애과

Protoribates crassisetiger (Choi, 1986)

Family Scheloribatidae Grandjean, 1933 판날개응애과

Scheloribates latipes (Koch, 1884)

S. *rigidisetosus* (Willmann, 1851)

Family Ceratozetidae Jacot, 1925 잔날개응애과

Ceratozetes japonicus (Aoki, 1961)

Ceratozetes mediocris (Berlese, 1908)

Boreozetes donghaksensis (Choi, 1986)

Diapterobates pusillus cuspidatus (Choi, 1986)

Family Phenopelopidae Ewing, 1917 엽마응애과

Euphelops acromios (Hermann, 1804)

Family Oribatellidae Jacot, 1925 판지개응애과

Oribatella meridionalis (Berlese, 1908)

O. *undulata* (Choi, 1986)

Family Galumnidae Jacot, 1925 나비응애과

Galumna longiporosa (Fujikawa, 1972)

Pergalumna altera (Oudemans, 1915)

P. *duplicata nipponica* (Aoki, 1963)

II. Oribatid mite at the mixed forest in Alt. 1,100m

Family Mesoplophoridae Ewing, 1917 어리조개응애과

Mesoplophora japonica (Aoki, 1966)

Family Brachychthoniidae Thor, 1934 마디응애과

Brachychthonius elsosneadensis (Hammer, 1958)*B. jugatus* (Forsslund, 1942)*Liochthonius sellnicki* (Thor, 1930)*L. sp. 1.**Poecilochthonius spiciger* (Berlese, 1910)

Family Hypochthoniidae Berlese, 1910 떠응애과

Eohypochthonius magnus (Aoki, 1977)*E. parvus* (Aoki, 1977)*Hypochthonius rufulus* (Koch, 1836)

Family Eniochthoniidae Grandjean, 1947 두줄떠응애과

Hypochthoniella minutissima (Berlese, 1904)

Family Eulohmanniidae Grandjean, 1953 유령응애과

Eulohmannia ribagai (Berlese, 1910)

Family Phthiracaridae Perty, 1841 조개응애과

Phthiracarus clemens (Aoki, 1963)

Family Oribotritiidae Grandjean, 1954 방패응애과

Oribotritia fennica (Forsslund et Markel, 1966)*Tenuialodes fusiformis* (Wooley et Higgins, 1965)

Family Steganacaridae Niedbala, 1986 가시조개응애과

Atropacarus (Atropacarus) striculus (Koch, 1836)

Family Euphthiracaridae Jacot, 1930 배꼽조개응애과

Microtrititia minima (Berlese, 1904[1905])*Rhysotrititia ardua* (Koch, 1841)

Family Camisiidae Oudemans, 1920 왕응애과

Camisia segnis (Hermann, 1804)*C. lapponica* (Tragardh, 1910)*Platynothrus yamasakii* (Aoki, 1958)*P. sp. 1.**Heminothrus minor* (Aoki, 1969)

Family Malaconothridae Berlese, 1916 장님응애과

Malaconothrus japonicus (Aoki, 1966)

M. pygmaeus (Aoki, 1969)

Family Nothridae Berlese, 1896 그물왕응애과

Nothrus biciliatus (Koch, 1841)

N. palustris (Koch, 1844)

N. silvestris (Niolet, 1855)

Family Trhypochthoniidae Willmann, 1931 쌍무늬응애과

Trhypochthonius tectorum (Berlese, 1896)

T. japonicus (Aoki, 1970)

Family Nanhermanniidae Sellnick, 1928 해면응애과

Cyrthermannia parallela (Aoki, 1961)

Masthermannia hirsuta (Hartman, 1949)

Nanhermannia elegantula (Berlese, 1913)

Family Damaeidae Berlese, 1896 빨염주응애과

Damaeus armatus (Aoki, 1984)

Epidamaeus sp.1.

E. sp.2.

E. sp.3.

Family Compactozetidae Luxton, 1988 가시만두응애과

Sadocephus undulatus (Aoki, 1965)

Family Damaeolidae Grandjean, 1965

Costeremus ornatus (Aoki, 1970)

Fosseremus quadripertitus (Grandjean, 1965)

Family Eremobelbidae Balogh, 1961 귀응애과

Eremobelba japonica (Aoki, 1959)

Family Ameridae Grandjean, 1965 민둥정응애과

Defectamerus soonkii (Choi et Aoki, 1985)

D. crassisetiger coreanus (Choi et Aoki, 1985)

D. sungohi (Choi et Aoki, 1985)

Family Heterobelbidae J. Balogh, 1961 어리염주응애과

Heterobelba sp.1.

Family Eremaeidae Sellnick, 1928 다리차양응애과

Eremaeus tenuisetiger (Aoki, 1979)

E. sp.1.

Family Astegistidae Balogh, 1961 달마응애과

Cultroribula lata (Aoki, 1961)C. *tridentata* (Aoki, 1965)

C. sp.1.

Family Gustaviidae Oudemans, 1900 싹톱응애과

Gustavia microcephala (Nicolet, 1855)

Family Liacaridae Sellnick, 1928 달갈응애과

Liacarus acutidens (Aoki, 1965)L. *orthogonios* (Aoki, 1959)

L. sp.1.

L. sp.2.

Family Metrioppodae Balogh, 1943 뜯지계응애과

Ceratoppia bipillis (Hermann, 1804)C. *quadridentata* (Haller, 1882)

Family Tenuialidae Jacot, 1929 쌍가시응애과

Hafenferrefia orbiculata (Aoki et Ohnishi)

Family Carabodidae Koch, 1842 검둥이응애과

Carabodes transversarius (Choi et Aoki, 1986)

Family Tectocephidae Grandjean, 1953 사각머리응애과

Tectocephus cuspidatus (Knülle, 1954)T. *velatus* (Michael, 1880)T. *titanius* (Okubo, 1982)

T. sp.1.

Family Oppiidae Grandjean, 1951 좁쌀응애과

Brachioppiella ctenifera barbata (Choi, 1986)*Machuella ventrisetosa* (Hammer, 1961)*Oppia minutissima* (Sellnick, 1950)O. *tokyoensis* (Aoki, 1974)O. *neerlandica* (Oudemans, 1900)

O. sp.1.

O. sp.2.

O. sp.3.

Oppiella nova (Oudemans, 1902)

Quadroppia quadricarinata (Michael, 1885)

Family Suctobelbidae Grandjean, 1954 유리창응애과

Suctobelbella naginata (Aoki, 1961)

S. *longisensillata* (Fujita et Fujikawa, 1987)

S. *yezoensis* (Fujikawa et Fujita, 1987)

S. sp.1.

S. sp.2.

S. sp.3.

Family Parakalummidae Grandjean, 1963 주머니나비응애과

Neoribates roubali (Berlese, 1910)

Protokalumma parvisetigerum (Aoki, 1965)

Family Protoribatidae Balogh et Balogh, 1984 긴소매응애과

Protoribates crassisetiger (Choi, 1986)

Family Xylobatidae Balogh et Balogh, 도포소매응애과

Xylobates geonjiensis (Choi, 1986)

Family Chamobatidae Gradjean, 1954

Chamobates pusillus (Bacot, 1966)

Family Ceratozetidae Jacot, 1925 잔날개응애과

Ceratozetes japonicus (Aoki, 1961)

Ceratozetes mediocris (Berlese, 1908)

Boreozetes donghaksensis (Choi, 1986)

Diapterobates pusillus cuspidatus (Choi, 1986)

Family Oribatellidae Jacot, 1925 판지개응애과

Oribatella meridionalis (Berlese, 1908)

Family Achipteridae Thor, 1929 뽕족날개응애과

Achipteria alpestris (Aoki, 1970)

A. *curta* (Aoki, 1970)

A. *imperfecta* (Suzuki, 1972)

Parachipteria distincta (Aoki, 1959)

Family Galumnidae Jacot, 1925 나비응애과

Galumna chujoi (Aoki, 1966)G. *longiporosa* (Fujikawa, 1972)*Pergalumna altera* (Oudemans, 1915)P. *akitaensis* (Aoki, 1963)P. *duplicata nipponica* (Aoki, 1963)*Pilogalumna steinmanni* (Aoki, 1974)**III. Oribatid mite at the north-facing slope site in Alt. 1,000 m****Deciduous forest with annual herbaceous vegetation**

Family Brachychthoniidae Thor, 1934 마디응애과

Brachychthonius elsosneadensis (Hammer, 1958)B. *hungarius* (Balogh, 1943)*Liochthonius sellnicki* (Thor, 1930)

L. sp.1.

L. sp.2.

Family Hypochthoniidae Berlese, 1910 띠응애과

Eohypochthonius magnus (Aoki, 1977)*Hypochthonius rufulus* (Koch, 1836)

Family Eniochthoniidae Grandjean, 1947 두줄띠응애과

Hypochthoniella minutissima (Berlese, 1904)

Family Perlohmanniidae Grandjean, 1953 장수응애과

Apolohmannia gigantea (Aoki, 1960)*Perlohmannia coiffaiti* (Grandjean, 1961)

Family Phthiracaridae Perty, 1841 조개응애과

Paraphthiracarus lanatus (Aoki, 1980)*Phthiracarus clemens* (Aoki, 1963)P. *japonicus* (Aoki, 1958)

Family Oribotritiidae Grandjean, 1954 방패응애과

Oribotritia fennica (Forsslund et Markel, 1966)

Family Steganacaridae Niedbala, 1986 가시조개응애과

Atropacarus (Atropacarus) striculus (Koch, 1836)

Family Euphthiracaridae Jacot, 1930 배꼽조개응애과
Rhysotritia ardua (Koch, 1841)

Family Camisiidae Oudemans, 1920 왕응애과
Camisia lapponica (Tragardh, 1910)
Platynothrus yamasakii (Aoki, 1958)
P. sp.1.
Heminothrus minor (Aoki, 1969)

Family Malaconothridae Berlese, 1916 장님응애과
Malaconothrus japonicus (Aoki, 1966)
M. *pygmaeus* (Aoki, 1969)
Trimalaconothrus nipponicus (Yamamoto et Aoki, 1971)

Family Nothridae Berlese, 1896 그물왕응애과
Nothrus biciliatus (Koch, 1841)
N. *palustris* (Koch, 1844)
N. *silvestris* (Niolet, 1855)

Family Nanhermanniidae Sellnick, 1928 해면응애과
Cyrthermannia parallela (Aoki, 1961)
Nanhermannia elegantula (Berlese, 1913)

Family Hermanniellidae Grandjean, 1934 호리병응애과
Hermanniella aristosa (Aoki, 1965)
H. *punctulata* (Berlese, 1908)

Family Damaeidae Berlese, 1896 빨염주응애과
Damaeus armatus (Aoki, 1984)
Epidamaeus sp.1.
E. sp.2.

Family Belbidae Willmann, 1931
Allobelba aculeata (Kunst, 1961)

Family Cepheidae Berlese, 1896 만두응애과
Sphodrocephus sp.1.

Family Damaeolidae Grandjean, 1965

Costeremus ornatus (Aoki, 1970)*Fosseremus quadripertitus* (Grandjean, 1965)

Family Eremobelbidae Balogh, 1961 귀응애과

Eremobelba japonica (Aoki, 1959)

Family Ameridae Grandjean, 1965 민동정응애과

Defectamerus soonkii (Choi et Aoki, 1985)D. *crassisetiger coreanus* (Choi et Aoki, 1985)

Family Heterobelbidae J. Balogh, 1961 어리엄주응애과

Heterobelba sp.1.

Family Eremaeidae Sellnick, 1928 다리차양응애과

Eremaeus sp.1.

Family Astegistidae Balogh, 1961 달마응애과

Cultroribula lata (Aoki, 1961)

Family Gustaviidae Oudemans, 1900 싯톱응애과

Gustavia microcephala (Nicolet, 1855)

Family Liacaridae Sellnick, 1928 달갈응애과

Liacarus acutidens (Aoki, 1965)L. *orthogonios* (Aoki, 1959)

Family Metrioppodae Balogh, 1943 뜯지게응애과

Ceratoppia bipillis (Hermann, 1804)C. *quadridentata* (Haller, 1882)

Family Carabodidae C.L. Koch, 1842 왕응애과

Carabodes sp.1.

Family Tectocephidae Grandjean, 1953 사각머리응애과

Tectocephus cuspidentatus (Knülle, 1954)T. *velatus* (Michael, 1880)T. *titanius* (Okubo, 1982)

Family Oppiidae Grandjean, 1951 줍쌀응애과

Oppia neerlandica (Oudemans, 1900)

O. sp.1.

O. sp.2.

O. sp.3.

Oppiella nova (Oudemans, 1902)

Quadroppia quadricarinata (Michael, 1885)

Family Suctobelbidae Grandjean, 1954 유리창응애과

Allosuctobelba sp.1.

Suctobelbella naginata (Aoki, 1961)

S. *longisensillata* (Fujita et Fujikawa, 1987)

S. *yezoensis* (Fujikawa et Fujita, 1987)

S. sp.1.

S. sp.2.

Family Parakalummidae Gradjean, 1963 주머니나비응애과

Protokalumma parvisetigerum (Aoki, 1965)

Family Scheloribatidae Grandjean, 1933 판날개응애과

Scheloribates latipes (Koch, 1884)

Family Protoribatidae Balogh et Balogh, 1984 긴소매응애과

Protoribates ctassisetiger (Choi, 1986)

Family Xylobatidae Balogh et Balogh, 도포소매응애과

Xylobates geonjiensis (Choi, 1986)

Family Ceratozetidae Jacot, 1925 잔날개응애과

Diapterobates pusillus cuspidatus (Choi, 1986)

D. *songliensis* (Choi, 1985)

Family Oribatellidae Jacot, 1925 판지개응애과

Oribatella meridionalis (Berlese, 1908)

Family Achipteridae Thor, 1929 뽕족날개응애과

Parachipteria distincta (Aoki, 1959)

Family Galumnidae Jacot, 1925 나비응애과

Galumna longiporosa (Fujikawa, 1972)

Pilogalumna steinmnni (Aoki, 1974)

**IV. Oribatid mite at the south-facing slope site in Alt. 1,000 m
Deciduous forest with perennial sasa vegetation**

Family Palaeacaridae Grandjean, 1932 옛응애과
Palaeacarus hystricinus (Tragardh, 1932)

Family Brachychthoniidae Thor, 1934 마디응애과
Brachychthonius elsosneadensis (Hammer, 1958)

B. jugatus (Forsslund, 1942)

B. hungarius (Forsslund, 1942)

Liochthonius sellnicki (Thor, 1930)

L. sp.1.

L. sp.2.

L. sp.4.

Family Gehypochthoniidae Stranzke, 1963
Gehypochthonius rhadamantus (Jacot, 1936)

Family Hypochthoniidae Berlese, 1910 띠응애과
Eohypochthonius magnus (Aoki, 1977)
E. parvus (Aoki, 1977)
Hypochthonius rufulus (Koch, 1836)

Family Eniochthoniidae Grandjean, 1947 두줄띠응애과
Hypochthoniella minutissima (Berlese, 1904)

Family Eulohmanniidae Grandjean, 1953 유리응애과
Eulohmannia ribagai (Berlese, 1910)

Family Phthiracaridae Perty, 1841 조개응애과
Paraphthiracarus lanatus (Feider et Suciui)
Phthiracarus clemens (Aoki, 1963)
P. japonicus (Aoki, 1958)

Family Oribotritiidae Grandjean, 1954 방패응애과
Oribotritia fennica (Forsslund et Markel, 1966)
Protoribotritia ensifer (Aoki, 1973)

Family Steganacaridae Niedbala, 1986 가시조개응애과
Atropacarus (Atropacarus) striculus (Koch, 1836)

Hoplophthiracarus sp.1.

Family Euphthiracaridae Jacot, 1930 배꼽조개응애과
Rhysotritia ardua (Koch, 1841)

Family Camisiidae Oudemans, 1920 왕응애과
Camisia lapponica (Tragardh, 1910)
Platynothrus yamasakii (Aoki, 1958)
P. sp.1.
Heminothrus minor (Aoki, 1969)

Family Malaconothridae Berlese, 1916 장님응애과
Malaconothrus japonicus (Aoki, 1966)
M. *pygmaeus* (Aoki, 1969)
Trimalaconothrus nipponicus (Yamamoto et Aoki, 1971)

Family Nothridae Berlese, 1896 그물왕응애과
Nothrus biciliatus (Koch, 1841)
N. *palustris* (Koch, 1844)
N. *silvestris* (Niolet, 1855)

Family Trhypochthoniidae Willmannm, 1931 쌍가시응애과
Trhypochthonius tectorum (Berlese, 1896)

Family Nanhermanniidae Sellnick, 1928 해면응애과
Cyrtherminnia parallela (Aoki, 1961)
Nanhermannia elegantula (Berlese, 1913)

Family Hermanniellidae Grandjean, 1934 호리병응애과
Hermanniella punctulata (Berlese, 1908)

Family Damaeidae Berlese, 1896 빨염주응애과
Damaeus armatus (Aoki, 1984)
Epidamaeus sp.1.
E. sp.2.

Family Cepheidae Berlese, 1896 만두응애과
Sphodrocephus sp.1.

Family Damaeolidae Grandjean, 1965

Costeremus ornatus (Aoki, 1970)

C. sp.1.

Fosseremus quadripertitus (Grandjean, 1965)

Family Eremobelbidae Balogh, 1961 귀응애과
Eremobelba japonica (Aoki, 1959)

Family Ameridae Grandjean, 1965 민동정응애과
Defectamerus soonkii (Choi et Aoki, 1985)
D. *sungohi* (Choi et Aoki, 1985)

Family Heterobelbidae Balogh, 1961 어리염주응애과
Heterobelba sp.1.

Family Astegistidae Balogh, 1961 달마응애과
Cultroribula lata (Aoki, 1961)
C. *tridentata* (Aoki, 1965)
C. sp.1.

Family Gustaviidae Oudemans, 1900 싯툽응애과
Gustavia microcephala (Nicolet, 1855)

Family Liacaridae Sellnick, 1928 달갈응애과
Liacarus acutidens (Aoki, 1965)
L. *orthogonios* (Aoki, 1959)
L. sp.1.

Family Metrioppodae Balogh, 1943 뜯지게응애과
Ceratoppia bipillis (Hermann, 1804)
C. *quadridentata* (Haller, 1882)

Family Xenillidae Wolley et Higgins, 1966 살짝곰보응애과
Xenillus tegeocranus (Hermann, 1804)

Family Carabodidae Koch, 1842 왕응애과
Carabodes peniculatus (Aoki, 1970)
C. *transversarius* (Choi et Aoki, 1986)

Family Octocephidae Balogh, 1961 오징어응애과
Fissicepheus clavatus (Aoki, 1959)

Family Tectocepheidae Grandjean, 1953 사각머리응애과

Tectocepheus cuspidentatus (Knülle, 1954)T. *velatus* (Michael, 1880)T. *titanius* (Okubo, 1982)

Family Oppiidae Grandjean, 1951 좁쌀응애과

Brachioppiella ctenifera barbata (Choi, 1986)*Multioppia* sp.1.*Oppia tokyoensis* (Aoki, 1974)O. *neerlandica* (Oudemans, 1900)

O. sp.1.

O. sp.2.

O. sp.3.

Oppiella nova (Oudemans, 1902)*Quadroppia quadricarinata* (Michael, 1885)

Family Suctobelbidae Grandjean, 1954 유리창응애과

Suctobelbella naginata (Aoki, 1961)S. *longisensillata* (Fujita et Fujikawa, 1987)S. *yezoensis* (Fujikawa et Fujita, 1987)S. *frondosa* (Aoki et Fukuyama, 1972)

S. sp.1.

S. sp.2.

Family Oribatulidae Thor, 1929 판지게응애과

Oribatula sakamorii (Aoki, 1970)

Family Oripodidae Jacot, 1925 뚜껑응애과

Oripoda pinicola (Aoki et Ohkubo, 1974)

Family Parakalummidae Grandjean, 1963 주머니나비응애과

Neoribates roubali (Berlese, 1910)*Protokalumma parvisetigerum* (Aoki, 1965)

Family Scheloribatidae Grandjean, 1933 판날개응애과

Schelorbates rigidisetosus (Willmann, 1851)

S. sp.1.

Family Protoribatidae Balogh et Balogh, 1984 긴소매응애과

Protoribates crassisetiger (Choi, 1986)

P. angulatus (Choi, 1986)

Family Xylobatidae Balogh et Balogh, 도포소매응애과
Xylobates geonjiensis (Choi, 1986)

Family Chamobatidae Grandjean, 1954
Chamobates pusillus (Berlese, 1966)

Family Ceratozetidae Jacot, 1925 잔날개응애과
Ceratozetes japonicus (Aoki, 1961)
C. mediocris (Berlese, 1908)
Boreozetes donghaksensis (Choi, 1986)
Diapterobates pusillus (Aoki, 1969)
D. pusillus cuspidatus (Choi, 1986)
D. songliensis (Choi, 1985)

Family Achipteriidae Thor, 1929 뽕족날개응애과
Parachipteria distincta (Aoki, 1959)

Family Galumnidae Jacot, 1925 나비응애과
Galumna longiporosa (Fujikawa, 1972)
Pergalumna altera (Oudemans, 1915)
P. duplicata nipponica (Aoki, 1963)

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점봉산 천연보호림 지역의 날개응애 (Acari: Oribatida) 목록

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점봉산 천연보호지역에서 식생이 다른 4지역을 대상으로 한 날개응애류 생물상 조사에서 총 52과 81속 143종이 조사되었다. 고도 900 m의 잣나무 조림지에서는 33과 48속 102종, 고도 1,100 m의 혼효림지역에서는 38과 57속 97종, 고도 1,000 m의 천연 활엽수림지역에서는 하부 식생이 일년생 초본류인 북사면에서는 36과 49속 72종, 하부식생이 조릿대인 남사면에서는 44과 63속 102종이 조사되었다.

검색어 : 날개응애, 잣나무, 혼효림, 활엽수, 점봉산

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